Chapter 4. Revisions to the Draft EIR

This chapter, which identifies all changes to be made to the draft EIR in response to public and agency comments, is errata to be inserted into the draft EIR to provide a complete record of the EIR's final text. This chapter organizes the changes for each chapter in the draft EIR. All changes indicated in this chapter are reflected in the Responses to Comments in Chapter 3. The location of each change is identified, and the revised text is provided. Added text is indicated with double underlining (additions) and deleted text is struck out (~~deletions~~).

Executive Summary

The first paragraph on draft EIR page ES-2 is hereby revised to include the following final sentence:

> Biosolids is defined as sewage sludge that has been treated and tested and shown to be capable of being beneficially and legally used as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities as specified under 40 CFR Part 503.

The third paragraph on page ES-2, fifth sentence is revised to read:

> The IWMB designates a reasonable ~~local~~ agency ~~in each county~~...

The beginning of the final paragraph on page ES-3 and other occurrences are revised as follows:

> The California Association of ~~Sanitary~~ Sanitation Agencies (CASA) . . .

The following text has been added to page ES-6, under "Overview," immediately before the last sentence:

> Projects that fail to meet the criteria established by the GO may still apply for an individual permit from the RWQCB.

Text on page ES-6, second paragraph under Applicability, first sentence: Change to read:

> Under the GO, the discharger is primarily defined as the landowner

and generator but also may include the individual business, or organization involved in the ~~generation,~~ transportation, use, and application of biosolids.

Text on page ES-6, third paragraph under Applicability, second sentence: Change to read:

In addition, each landowner involved with a biosolids application project must file a separate NOI, ~~and~~ pay a separate filing fee and list each generator associated with the proposed operation as co-dischargers.

The text for the 10th bullet on page ES-9 of the draft EIR now reads:

~~no application or incorporation into the soil is permitted when wind may reasonably be expected to cause airborne particulate to drift from the site~~ the application of biosolids containing a moisture content of less than 50 percent is prohibited;

The text on page ES-10, last paragraph, third sentence of the draft EIR is revised as follows:

The proposed GO defines short-term...for ~~more than~~ longer than 48 hours but less than . . .

The first impact on page 3 of Table ES-1:

Potential soil degradation at recreation-area ~~apploication~~ application sites

Chapter 1. Introduction

Text on page 1-2, second paragraph under Existing Regulations for Land Application of Biosolids, fifth sentence, revise to read:

The IWMB designates a responsible ~~local~~ agency ~~in each county~~ as the local enforcement agency (LEA), which sets standards and enforces solid waste regulations. On the local level, ~~S~~some...

Chapter 2. Program Description

The last complete sentence on page 2-6 of the draft EIR is hereby revised to read:

Biosolids are considered Class A Exceptional Quality (EQ) if they meet all

of the pollutant concentration limits and vector attraction reduction options 1-8 in Part 503.88, as well as Class A pathogen reduction standards.

The following text has been added to page 2-10, under "Overview," immediately before the last sentence:

> Projects that fail to meet the criteria established by the GO may still apply for an individual permit from the RWQCB.

Text on page 2-10, second paragraph under Applicability, first sentence: change to read:

> Under the GO, the *discharger* is defined as primarily the landowner and generator but could also include the individual business, or organization involved in the ~~generation,~~ transportation, use, and application of biosolids.

Text on page 2-10, third paragraph under Applicability, second sentence: change to read:

> In addition, each landowner involved with a biosolids application project must file a separate NOI, pay a separate filing fee and list each generator associated with the proposed operatoin as co-dischargers.

Text on page 2-15, fifth line under "Monitoring, Reporting, and Record Keeping", is modified as follows:

> ...~~disposal~~ application site is...

The second sentence of the last paragraph on page 2-15 has been revised as follows:

> Sampling must be conducted using approved methods, accurate and properly calibrated equipment, and ~~certified~~ laboratories certified by the California State Department of Health Services.

The citation for Figure 2-2 has been revised as follows:

> California Association of Sanitation Agencies. 1999; Fondahl, Brisco, and Thurber pers. comms.

Chapter 3. Soils, Hydrology, and Water Quality

Page 3-8 of the draft EIR, last sentence, is hereby revised:

> This is approximately the equivalent of the state and federal drinking water standard, 10 mg/l of nitrate expressed as nitrogen (~~NO_3~~ ~~-~~N).

The following information has been added to Table 5-3, at the end of the list of human pathogens:

Cyclospora cayetanesis	Cyclosporiasis (severe Diarrhea)	None known

The draft EIR, page 3-35, last sentence of second paragraph, is hereby revised as follows:

> In areas with shallow groundwater and frequent biosolids application, monitoring is required that would result in early detection if leaching of substantial quantities of pollutants were occurring.

Chapter 4. Land Productivity

The first paragraph of Mitigation Measure 4-1 on page 4-5 is revised as follows:

> The GO Pre-Application report.....2) metals related phytotoxicity does not occur, 3) metals related forage toxicity or mineral deficiencies and other trace metals related problems do not occur on hay lands and pasture lands, 4) increases in salinity.....

The third paragraph of Mitigation Measure 4-1 is revised as follows to eliminate the "applicant" from those qualified to perform the analysis, unless of course the applicant is also a qualified soil scientist or agronomist:

> This information should be used by a certified soil scientist~~,~~ or a certified agronomist to evaluate the above potential effects on land productivity. The soil scientist and/or agronomist should make recommendations in a letter report to accompany the Pre-Application report regarding the proper rate of biosolids applications, any soil management (such as supplemental fertilizers and pH adjustment), appropriate crop, and grazing practice recommendations, considering the nature of the application site soils and biosolids characterization data, and the need to preserve short term and long term land productivity.

Mitigation Measure 4-1 is revised to prohibit known bioaccumulative crops, as follows:

> At sites having a "moderate" limitation, biosolids may be applied only where the crop is not known to be particularly sensitive to metals and nutrient imbalances, or is not known to be bioaccumulative of heavy metals.

Table 15-1, Mitigation Measure 4-1 (under the Monitoring and Enforcement Action column) of the draft EIR is hereby revised such that "phototoxicity" is changed to "Phytotoxicity."

The text in the last sentence, third paragraph on page 4-7 is revised as follows:

> ...., making impacts more than additive in some cases.

The statement on page 4-9 is hereby revised as follows:

> However, biosolids have been land applied to California soils for over 20 years in some areas and no significant land productivity problems related to heavy metals have been documented.

The second sentence of Mitigation Measure 4-2 on page 4-12 should be revised as follows:

> The proposed GO should also be revised to ~~prohibit grazing animals from using a site~~ require that grazing of animals be deferred for at least 60 days after.....

The following text is added to the end of Mitigation Measure 4-2 on page 4-12 of the draft EIR:

> Refer also to Mitigation Measure 4-1, which requires comprehensive testing and analysis of soils and biosolids by qualified professionals.

Chapter 5. Public Health

Page 5-1, the second sentence of the first paragraph, has been changed as follows:

> Pathogens (or pathogenic organisms) are disease-causing organisms, including certain bacteria, parasites, and viruses.

Page 5-3, second sentence of the second paragraph, "Emerging pathogens are briefly described . . . (there have been no reported disease outbreaks)" has been replaced with the following:

> Emerging pathogens are organisms responsible for new, reemerging, or drug-

resistant infections whose incidence in humans has increased within the past two decades or whose incidence threatens to increase in the near future. Included are such pathogens as *E. coli* O157:h7 and *Cyclospora*, which have caused several outbreaks in California.

Page 5-3, in the second paragraph, the following has been added to the second-to-last sentence:

(for example, by travelers or by importation of contaminated food or animals).

In Table 5-1, the number of types of salmonella in left column has been changed to (≥2,000 types) from (1700 types).

Table 5-1, "infectious" has been changed to "infective" in the heading for the last table column.

The units of measure for the column headed Density of Biosolids should be (no/gm dry wt) as shown in Tables 5-2 and 5-3. The units of measure for the column headed Survival Time should be Days as shown in Tables 5-2 and 5-3. The units of measure for the column headed Infectious Dose should be Numbers of Organisms and should be included in Tables 5-1, 5-2, 5-3 and 5-4.

Table 5-3, *Cyclospora* has been added to the list of human pathogens.

Table 5-3, column 3, entitled Nonhuman Reservoir is amended to include the following vectors for the human pathogens *Cryptosporidium*: feral hogs, coyotes, squirrels and rats ; and *Giardia* spp.: cattle, feral hogs, coyotes, squirrels and rats.

The first full paragraph on page 5-4, starting with the 12th line, has been changed as follows:

Tables 5-1 through 5-4 list the specific disease organisms, diseases they cause, host organisms, and the ~~infection~~ infective dose....

With the sentence beginning on line 17, make the following changes:

The infective dose for some ~~salmonellae~~ salmonella serotypes and other pathogenic . . . organisms can ~~increase~~ multiply in high numbers. . . The infective dose for *Salmonella* sp. varies by serotype and host factors.

The following text has been added to page 5-5, after the first paragraph, before the heading Emerging Pathogens of Concern:

As an example of the unavoidable uncertainty associated with the impacts

from pathogens in biosolids, the authors of the study, "Hazards from Pathogenic Microorganisms in Land-Disposed Sewage Sludge," explain the following:

> It should be recognized that the list of pathogens is not constant. As advances in analytical techniques and changes in society have occurred, new pathogens are recognized and the significance of well-known ones changes. Microorganisms are subject to mutation and evolution, allowing for adaptation to changes in their environment. In addition, many pathogens are viable but nonculturable by current techniques [cite], and actual concentrations in sludge are probably underestimated. Thus, no assessment of the risks associated with the land application of sewage sludge can ever be considered to be complete when dealing with microorganisms. As new agents are discovered and a greater understanding of their ecology is developed, we must be willing to reevaluate previous assumptions.

The following text replaces the first paragraph on page 5-5:

> In most outbreaks of unknown cause or unknown source, a single or small list of organisms is normally suspected. If the causative agent is not identified or confirmed, it is because (1) the patient not seeking medical attention, (2) no laboratory diagnostic tests (including stool cultures and examination) are performed, and (3) either late or nonreporting of illnesses occurs that hinders the investigation of individual cases or outbreaks. Although most outbreaks are attributable to bacterial causes, limitations on our present diagnostic capabilities may also hinder a confirmatory diagnosis. New techniques using genetic markers and electron microscopy have improved laboratory capabilities to detect and identify pathogens, particularly viruses. There continue to be numerous sporadic cases of diseases (particularly gastroenteritis) of unknown cause or unknown source that arise and may be associated with a number of agents or sources. A literature review of disease outbreaks on a worldwide basis was performed to determine some of the emerging pathogens and their modes of transmission. The results of this search are summarized in Appendix E. The results indicated that the reported cases are normally associated with poor sanitation, poor food preparation and handling practices, or drinking contaminated water. Information on emerging pathogens of concern (bacteria, parasitic microsporidians, viruses, and bovine spongiform encephalophathy) is presented in Appendix E. These are in addition to those pathogens such as *E. coli* O157:h7 and Cyclospora that which have caused several outbreaks in California.

Revisions to the text starting on paragraph 3 of page 5-6 and ending with paragraph 2 on page 5-7 are as follows:

Data on the diseases of interest (those listed in Tables 5-1 through 5-4) were obtained from the ~~DHS~~ Department of Health Services (DOHS) (descriptions of the diseases of interest are provided in Appendix E). These data consisted of records on reportable diseases that are ~~voluntarily~~ provided by local county and city health departments (Starr pers. comm.). The diseases for which data were obtained are those with causative agents that could be derived from biosolids; therefore, certain diseases that were rare, not reported, or not related to biosolids were not included (AIDS, fungal diseases, and nonspecific gastroenteritis). The ~~DHS~~ DOHS information consisted of 46,159 records representing 300,818 cases of disease and covering the period from ~~1991~~ 1990 though 1998 for some diseases and ~~1993~~ 1992 to 1998 for Enterotoxic *E. coli* O157:h7 ~~others of more recent origin/or reporting requirements~~. The information was sorted by county, year, and disease (and broken down by pathogenic organisms) and is presented in Tables E-1a and E-1b through E-16 a and E-16b in Appendix E for the number of cases and the incidence rate per 100,000 people by county and summarized on a statewide basis by year in Tables 5-6a and 5-6b. The summary data show that the number of cases of a particular disease and incidence rates ~~varies~~ vary from year to year as conditions favor its occurrence in a particular population.

The incidence of diseases presented on a statewide basis in Table 5-6a are shown by county for the past ~~6 to 8~~ 6-9 years (depending upon when the reporting was started for a particular disease) in Tables 5-7a and 5-7b and 5-8a and 5-8b. Also shown next to each county name (in parentheses) is the county's ranking in the state from the highest (1) to the lowest in terms of the amount of biosolids applied on land in that county in 1998. ~~Table~~ Tables 5-7a and 5-7b ~~contains~~ contain a summary of the bacterial and viral diseases. ~~Table~~ Tables 5-8a and 5-8b ~~summarizes~~ summarize the data on parasitic protozoan and ~~worm~~ helminth diseases that are reported.

As noted in ~~Tables~~ Table 5-5 ~~7 and 5-8~~, the Central Valley counties of Kern, Merced, and Kings ranked first, second, and third in terms of the amount of biosolids that were land applied. The amounts applied ~~(see Table 5-5)~~ were 32%,13%, and 13%, respectively, of the statewide total, or about 58% of the statewide total that was land applied. ~~These three counties had no reported cases of salmonellosis or shigellosis, the two most prevalent bacterial diseases, in 6 years.~~

The comparison of the number of reported outbreaks of acute infectious disease and the listing of counties where biosolids reuse occurs showed no apparent association between the highest biosolids use and any unusual

illness outbreaks or patterns. Furthermore~~, no incidents of acute or chronic disease associated with the use or handling of biosolids were found through examination of these data,~~ discussions with public health officials and a ~~, or~~ review of available literature and discussions with other experts in the field revealed no reported disease problems associated with biosolids land application operations. Again, the types of diseases that might occur are not those that would normally be reported unless it was a severe case involving a visit to a doctor or hospital.

The third paragraph of page 5-6, third sentence is revised by striking out the word "voluntarily".

Page 5-6, the last sentence of the fourth paragraph, "worm" has been changed to "helminthes".

The following change was made to page 5-9:

~~"Living things have evolved with these natural substances ("endocrine disruptors") and have mechanisms to metabolize or degrade them so they do not bioaccumulate."~~

Page 5-14, in the fourth paragraph, the following changes have been made:

No reported cases of airborne transmission of disease ~~were identified~~ have been documented in California as it related to biosolids management although the potential exists.

The following items are added to the list of regulations in Chapter 5, page 5-22:

California Health and Safety Code, Division 104, Part 5 (Sherman Food, Drug and Cosmetic Law)

California Uniform Retail Food Facilities Law (CURFFL; Health and Safety Code Sections 27500 et seq.)

The following item is deleted from the list of regulations in Chapter 5, page 5-22:

~~Model Food Code (42 U.S.C. 243 and 311 and 31 U.S.C. 686 authorities)~~

The text on page 5-26, paragraph four, and page 5-27, first paragraph, is amended as follows:

Incidental human contact and farmworker and family contact with biosolids

were evaluated in an extensive study reported by Dorn et al. (1985). The 3-year study covered three geographical areas in Ohio and included 47 farms (164 persons in 78 families were evaluated) receiving annual applications of treated sludge (average of 2-10 dry metric tons/hectare/year; average of ~~20-90~~ 3.6-17.8 wet tons per acre per year at 25% solids) (Dorn et al. 1985). The illness rates in the families at their farms were compared with 46 control farms (130 persons from 53 families), all of whom initially participated by cooperating with monthly questionnaires concerning their health and their animals' health, annual tuberculin testing, and quarterly blood sampling for serological testing. It should be noted that the number of participating farms dropped as the study went on, and only 27% of the 93 original farms completed participation in the 3-year study.

A summary of the two study groups and their numbers over the years is shown below:

Unit	Study Group	Number Started	Number Participating		
			1 Year	2 Years	3 Years
Farms	Sludge	47	47	36	13
	control	46	46	37	13
Participants	Sludge	165	165	126	53
	control	130	130	109	37

Source: Comment letter 43, page 17 as cited from Dorn et al. 1985.

The study found that the estimated risks of respiratory illness, digestive illness, or general symptoms were not significantly different between sludge farm and control farm residents (Dorn et al. 1985). It also found no observed differences between disease occurrence in domestic animals on sludge and on control farms. The frequency of serological conversions (fourfold or greater rise in antibody) to a series of 23 test viruses and the frequency of associated illnesses were similar among persons on sludge and control farms. The absence of observed human or animal health effects resulting from sludge application in this study of Ohio farms should be considered with the knowledge that relatively low sludge application rates were used on these farms; the rates ~~are consistent with~~ were lower than typical application rates for agricultural uses in California (which may be as high as 30-40 wet tons per acre per year). Necropsy data and analyses of tissues found significant cadmium and lead accumulations in the kidneys of calves grazing sludge-treated pastures. The consequences of this are not known in terms of either animal health or human health, assuming humans

consume the kidney tissue on a regular basis in animals that bioaccumulate trace metals in their organs.

The authors reported that "the possibility of PCB and other toxic organics reaching crop land is an issue of concern to farmers" and indicated that "more research is needed." They further noted that "caution should be exercised in using these data to predict health risks associated with sludges containing higher levels of disease agents and with higher sludge application rates and larger acreages treated per farm than used in this study" (Dorn et al. 1985). No similar subsequent studies have been conducted because the risks were deemed to be low and the costs for such studies are very high.

The second sentence of the last paragraph on p. 5-34 is amended as follows:

The proposed GO contains sufficient provisions to prevent such occurrences (setbacks, minimum distances to wells, ~~minimum depth to groundwater,~~ runoff controls, and prohibitions to long-term storage piles where concentrations of pathogens might be higher if leached to groundwater.

Chapter 5 of the EIR is modified to include the following on page 5-36 after the last paragraph:

It is noteworthy to add that research on this issue is continuing and that the present lack of information or reported disease associated with exposure to aerosols near biosolids land application sites should not be taken as an indication that there are no risks. Everything that humans do has risks, but as stated in the draft EIR, these risks are considered less than significant for the general population. For active workers in the vicinity of biosolid mixing and application sites, it can be anticipated that exposure to higher levels of potential aerosols (mainly fine particles to which pathogenic microorganisms could attach) is likely.

Under high wind conditions or when Class B biosolids or certain compost products are loaded or spread, there may be exposure of applicators or workers to aerosols or dusts that can contain potentially viable pathogenic microorganisms. To date, health risks are not deemed to be significant; therefore, this impact is considered less than significant. However, the following mitigation measure is recommended and is not required to reduce the level of significance for this impact.

Mitigation Measure 5-3. As part of good management practices, it is recommended that workers who are loading or working near sites where Class B biosolids are mixed or loaded or are applied by surface spreading wear respirators or masks to protect against inhalation of aerosols or fine particles

derived from the biosolids being handled.

The third sentence of the first paragraph on page 5-38 of the draft EIR is hereby revised as follows:

> Use of Class A biosolids for larger scale landscaping projects would be subject to the proposed GO if the material were applied at high rates.

The second sentence of Mitigation Measure 5-2 has been revised as follows:

> The proposed GO should also be revised to ~~prohibit grazing animals from using a site~~ require that grazing of animals be deferred for at least 60 days after.....

Chapter 6. Land Use and Aesthetics

The fourth and sixth sentences on page 6-3 of the draft EIR are hereby revised as follows:

> Types of crops commonly grown on agricultural biosolids ~~disposal~~ land application sites are row crops that are not typically used for human or dairy animal consumption . . . The visual impact of such sites is limited, and because they are located away from urban centers and major highways, most people are unaware of their status as biosolids ~~disposal~~ land application sites.

Page 6-7 of the draft EIR, first impact and Mitigation Measure 6-1, are revised as follows:

> **Impact: Application of Class B Biosolids at Locations That May Conflict with Existing Land Uses in Urban Area; Recreation Areas; or Other Sensitive Areas, Including Schools, Hospitals, and Recreation/Public Assembly Areas**
>
> The proposed GO contains specifications, exclusions, and prohibitions designed to minimize conflicts with land uses adjacent to application sites. For example, it specifies areas of the state identified as "unique and valuable public resources" that are not regulated by the proposed GO and for which site-specific permits would be required; it requires compliance with the provisions of Part 503 regulations regarding the land application of biosolids that meet provisions for vector reduction; ~~it prohibits the dissemination from biosolids application sites of visible airborne biosolids particles~~, it stipulates the use of tillage procedures that minimize wind erosion; and it prohibits application within 500 feet of residential buildings. ~~However, the GO does not include setbacks from facilities for recreation activities; places of public~~

~~assembly; hospitals; or other sensitive receptors that could be included under the definition of "populated areas" provided under "High Potential for Public Exposure Areas" in the definition section of the GO.~~ Although the proposed GO identifies the types of land uses where the high potential for public exposure could occur, it does not prohibit the use of biosolids adjacent to these areas. (The application of Class A biosolids would not conflict with these potential adjacent land uses because Class A biosolids have been treated to meet more stringent pathogen reduction standards than Class B biosolids.) The application of Class B biosolids near these sensitive receptors could conflict with the land use (activities could be disturbed as a result of increased noise or traffic). This impact is considered potentially significant. To reduce this impact to a less-than-significant level, the SWRCB shall implement Mitigation Measure 6-1.

~~Mitigation Measure 6-1. Require setbacks from areas defined as having a high potential for public exposure~~. ~~The GO will be modified to state that:~~

~~(a) no application of Class B biosolids shall be permitted within an area defined in the GO as having a high potential for public exposure unless the biosolids are injected into the soil and~~

~~(b) educational facilities; facilities designed for recreation activities other than hunting, fishing, or wildlife conservation; places of public assembly; hospitals; or similar sensitive receptors shall be included in the definition of "populated area" as used in conjunction with the designation "High Potential for Public Exposure Areas."~~

Mitigation Measure 6-1. Require injection of biosolids in areas defined as having a high potential for public exposure for Class B biosolids. The proposed GO will be modified to state that no application of Class B biosolids shall be permitted within an area defined in the proposed GO as having a high potential for public exposure unless the biosolids are injected into the soil.

Chapter 7. Biological Resources

Mitigation Measure 7-1 on page 7-12 of the draft EIR has been modified by adding the following text immediately after the word "species" in line four:

; this report must be forwarded to the appropriate regional office of the DFG and the Endangered Species Unit of the USFWS in Sacramento for review and approval of the mitigation strategy.

The following statement has been added to Mitigation Measure 7-2 on page 7-12 of the draft EIR, immediately following the word "habitats" in the last line of the mitigation:

> ; this report must be forwarded to the appropriate regional office of the DFG and the Endangered Species Unit of the USFWS in Sacramento for review and approval of the mitigation strategy.

Chapter 8. Fish

Mitigation Measure 8-1 on page 8-4 of the draft EIR is modified by adding the following statement at the end of the paragraph:

> There are several species of pupfish in southern California. Their current occupied habitat is confined to several small springs, Salt Creek and the Amargosa River in southern Inyo and northern San Bernardino counties in the vicinity of Death Valley National Monument, and San Felipe Creek and the Salton Sea in Imperial County. Exact locations of habitat can be found in Moyle et al. 1989.

Chapter 10. Air Quality

The text for page 10-5, last paragraph, first sentence in the draft EIR is revised as follows:

> ~~The proposed GO also prohibits the release of any visible airborne particles from the application site during biosolids application or during incorporation of biosolids into the soil.~~ The proposed GO also requires biosolids to be at least 50 percent moisture and to be incorporated within 24 hours in arid areas and 48 hours in all other areas.

The last paragraph on the thresholds of significance for air quality on page 10-6 has been deleted and replaced with the following:

> Project-related emissions typically are considered significant if they exceed specific thresholds established by individual air districts. Those thresholds are generally for land use development projects that would result in permanent long-term emissions. In contrast, biosolids application at any one site would be short term because increased traffic volumes and associated air emissions would occur only during the brief period when the biosolids are delivered and applied. Even though traffic and air emissions for any single biosolids

application project would be short-term, area-wide emissions from several biosolids application projects have the potential to create significant air quality impacts.

The first impact on page 10-7 and associated mitigation measures (Mitigation Measures 10-1 and 10-2) have been deleted and replaced with the following:

Impact: Significant Increase in ROG, NOx, and PM10 from Biosolids Transport Vehicles and Biosolids Spreaders

Transporting biosolids from wastewater treatment plants to farms and spreading and mixing biosolids into the soil would generate vehicle emissions and fugitive dust from the use of heavy-duty transport vehicles and farm vehicles. Individually, such actions from a single biosolids project would occur on a short-term basis and would likely have less-than-significant air quality impacts. However, a large number of these actions occurring concurrently have the potential to generate substantial quantities of ozone precursors and PM10.

Individual air districts classified as nonattainment areas for the state or federal ozone or federal PM10 ambient standards are required to prepare state implementation plans (SIPs) and air quality management plans (AQMPs) showing how they will come into compliance with the ambient standards. Those plans include emission budgets for vehicles and nonvehicular sources. Emissions from heavy-duty vehicles, including biosolid transport vehicles, are included within the emission budgets prepared as part of ozone and PM10 AQMPs. Emissions from farm activities, including off-road vehicle travel and wind-blown dust, are also included in the emission budgets of those plans (O'Bannon pers. comm.). Consequently, both on-road and off-road vehicular emissions associated with biosolids application projects are included in the emission budgets in the applicable air quality plans. Because those plans describe the measures that would be used to attain the ambient standards, no additional mitigation measures are needed and the proposed project is considered to have less-than-significant air quality impacts from on- and off-road vehicle emissions.

Mitigation Measure: No mitigation is required.

Chapter 14. Alternatives Analysis

The last bullet on page 14-2 of the EIR has been revised as follows:

> Land application of Class B biosolids shall be prohibited, under the GO, within ½ mile of areas defined as having a 'high potential for public exposure'.

After the last paragraph on Public Health, page 14-14, add the following:

> Animal manures may pose a threat to human health. Farm animals such as cattle, pigs, and chickens become infested and excrete a number of human pathogens in their feces. These include *Salmonella*, *Campylobacter*, *Yersinia*, *E. coli 0157:H7*, *Listeria* spp., and the protozoan parasite *Cryptosporidium*. Cattle manure is believed to be the major source of both water- and food-borne outbreaks of *E. coli* in the United States associated with lettuce and apples.
>
> Although animals have not been known to be a source of human enteric viruses, recent studies shown that hepatitis E infects pigs and can be found in their feces. Two recent cases of hepatitis E in the United States are believed to have been associated with water- and food-borne outbreaks in the developing world (Meng et al. 1998).

Appendix A

Appendix A is the proposed GO. Revisions to this document made since issuance of the draft EIR can be reviewed in Appendix A; the entire revised text has been included in this final EIR.

Appendix E

Appendix E in the draft EIR, the Public Health Technical Appendix, has been revised and included in this final EIR as Appendix B. Refer to Appendix B for changes to the Public Health Technical Appendix.